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<p>(21) 国際出願番号 PCT/JP99/01574</p> <p>(22) 国際出願日 1999年3月26日(26.03.99)</p> <p>(30) 優先権データ 特願平10/100096 1998年3月27日(27.03.98) JP</p> <p>(71) 出願人（米国を除くすべての指定国について） 株式会社 ヘリックス研究所 (HELIX RESEARCH INSTITUTE)[JP/JP] 〒292-0812 千葉県木更津市矢那1532番地3 Chiba, (JP)</p> <p>(72) 発明者；および (75) 発明者／出願人（米国についてのみ） 村松正明(MURAMATSU, Masaaki)[JP/JP] 〒176-0022 東京都練馬区向山3-15-13 Tokyo, (JP) 若尾 宏(WAKAO, Hiroshi)[JP/JP] 若尾りか(WAKAO, Rika)[JP/JP] 〒292-0814 千葉県木更津市八幡台5-29-6 Chiba, (JP) 矢野和宏(YANO, Kazuhiro)[JP/JP] 〒292-0801 千葉県木更津市諒西829 サンビレッジ木更津B-106号 Chiba, (JP) 野口照久(NOGUCHI, Teruhisa)[JP/JP] 〒106-0047 東京都港区南麻布4-11-18-701 Tokyo, (JP)</p>		<p>陶山 明(SUYAMA, Akira)[JP/JP] 〒192-0372 東京都八王子市下柚木3丁目2番6-501 Tokyo, (JP)</p> <p>(74) 代理人 弁理士 清水初志, 外(SHIMIZU, Hatsushi et al.) 〒300-0847 茨城県土浦市御町1-1-1 関鉄つくばビル6階 Ibaraki, (JP)</p> <p>(81) 指定国 CA, JP, US, 欧州特許 (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE)</p> <p>添付公開書類 国際調査報告書</p>	
<p>(54) Title: METHOD FOR DETECTING CHANGE IN GENE EXPRESSION BY TREATING WITH TEST COMPOUND</p> <p>(54) 発明の名称 被検化合物処理による遺伝子発現の変化を検出する方法</p> <p>(57) Abstract A method for detecting a change in intracellular gene expression state induced by a treatment with a specific compound which comprises extracting intracellular mRNAs respectively from cells having been treated with the above compound and untreated cells (control) and comparing the constitutions of these mRNAs. In this method, a difference in the contents of cDNA having been hybridized with a specific probe can be measured by labeling cDNAs obtained from the isolated mRNAs with different fluorescent substances, mixing these cDNAs at a definite ratio and hybridizing them with the probe. Use of this method makes it possible to screen a gene the expression of which is changed by treating with a specific compound or to screen a compound capable of changing the expression of a specific gene.</p>			

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TITLE: Detection of gene expression with fluorescent labels, useful for screening genes and compounds capable of changing specific gene expression

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026	C12N 015/00	
WO 9950401	A1	

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GR IE IT LU MC NL PT S  
E

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APPL-DATE		
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ABSTRACTED-PUB-NO: WO 9950401A

BASIC-ABSTRACT: NOVELTY - Method for detecting a change in intracellular gene expression induced by treatment with a specific compound comprising obtaining cDNA copies of isolated intracellular mRNAs, fluorescently labeling the cDNA groups, and hybridizing the labeled cDNA groups with specific probe DNAs, is new.

DETAILED DESCRIPTION - The method for detecting a change in intracellular gene expression induced by treatment with a specific compound comprises:

- (a) isolating intracellular mRNAs from treated and untreated cells;
- (b) transcribing the isolated mRNAs to give cDNA groups;
- (c) applying different fluorescent labeling to the cDNA groups;
- (d) hybridizing the respective labeled cDNA groups with specific probe DNAs;  
and
- (e) measuring the difference in contents of cDNAs based on the generated fluorescence after hybridization.

INDEPENDENT CLAIMS are also included for the following:

- (i) a gene obtained after screening as above;
- (ii) a vector containing the gene of (i);
- (iii) a transformant containing the vector of (ii);
- (iv) a protein or peptide encoded by the gene of (i);
- (v) a method of screening for a compound capable of changing the expression of a gene corresponding to a probe DNA by performing steps (a)-(e) as described above, together with (f) selecting a compound that can

produce a difference in  
hybridized cDNA contents; and

(vi) a compound identified by the above method that has the ability to change the expression of a specific gene.

USE - The method is useful for screening for a gene whose expression is changed by treatment with a specific compound, or screening for a compound capable of changing the expression of a specific gene.

ADVANTAGE - The method is convenient and efficient because labeling with different fluorescent substances can be incorporated to aid detection of changes, including the application of a multi-probe DNA binding genome chip.

CHOSEN-DRAWING: Dwg.0/1

TITLE-TERMS:

DETECT GENE EXPRESS FLUORESCENT LABEL USEFUL SCREEN GENE  
COMPOUND CAPABLE  
CHANGE SPECIFIC GENE EXPRESS

DERWENT-CLASS: B04 D16

CPI-CODES: B04-E01; B04-E08; B04-F0100E; B06-A02; B06-A03;  
B11-C08E5; B12-K04;  
D05-H09; D05-H12; D05-H12E; D05-H14; D05-H17; D05-H19;

CHEMICAL-CODES:

Chemical Indexing M1 \*01\*  
Fragmentation Code  
M423 M710 M750 M905 N102 Q233  
Specfic Compounds  
A00NSA A00NSN

Chemical Indexing M1 \*02\*  
Fragmentation Code  
M423 M710 M905 N102 Q233  
Specfic Compounds  
A00H3N

Chemical Indexing M1 \*03\*

Fragmentation Code  
M423 M710 M905 N102 Q233  
Specific Compounds  
A00GTN

Chemical Indexing M2 \*04\*  
Fragmentation Code  
C108 D011 D022 D029 D210 G015 G100 H4 H402 H442  
H8 J0 J011 J1 J131 K0 L2 L220 L7 L730  
M1 M113 M280 M320 M412 M511 M520 M531 M540 M781  
M904 M905 N102 P831 Q233  
Specific Compounds  
06265K 06265U

Chemical Indexing M2 \*05\*  
Fragmentation Code  
D011 D013 D022 D029 D041 D111 D210 H1 H101 H142  
J5 J521 L9 L942 M280 M320 M412 M512 M520 M530  
M540 M781 M904 M905 N102 P831 Q233  
Ring Index  
05935  
Specific Compounds  
A04G8K A04G8U

Chemical Indexing M6 \*06\*  
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M905 P831 Q233 R614 R625 R639

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